UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
SILVER, DAVID

ART UNIT	PAPER NUMBER
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NOTIFICATION DATE	DELIVERY MODE
12/15/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 November 2009*.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,5,6,11,12 and 32-39* is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1,3,5,6,11,12 and 32-39* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☒ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date *11/16/09*.
4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application
6)☐ Other: _____ .

DETAILED ACTION

1. Applicant's request for reconsideration of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

2. Claims 1, 3, 5-6, 11-12, and 32-39 are currently pending in Instant Application.

Information Disclosure Statement

3. The information disclosure statement(s) (IDS) submitted on 11/16/2009 is/are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement(s) is/are being considered if signed and initialed by the Examiner.

Response to Arguments

Response: 35 U.S.C. § 102/103

4. **Examiner Response:**

4.1 Applicants' arguments are moot in view of new grounds of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:
1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1, 3, 5-6, 11, and 32-37, 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujiwara **(US 20020091875)**, in view of Davis **(US 20040034570)**, and further in view of Hoffberg **(US 6400996)**.

Fujiwara discloses: 1. (Currently Amended) A computer-implemented method for providing predictive information to a human user during the course of conducting an interactive session with a customer, during which interactive session the human user uses prediction results to an application computing

system comprising one or more software applications that run in a computing environment the

application computing system connected to communicate with a prediction computing engine, the

computer-implemented method comprising:

the application computing system sending a first electronic request to the prediction computing

engine to perform a first prediction determination of a probability that the customer will take a predefined

action, the first electronic request including a first input value set **(0132; 0178)**;

in response to the first electronic request, the prediction computing engine using the first input

value set to perform the first prediction determination, electronically storing first state information

generated as part of the first prediction determination, and providing to the application computing system

for use by the human user a first prediction result of the first prediction determination **(0178; the**

customer disclosed in the reference is the user, and is inherently a human. The human user

in the claimed invention can be the identical entity as the customer.);

at a later point in time during the interactive session with the customer when additional

information about the customer becomes available, the application computing system sending a second

request to the prediction computing engine to perform a second prediction determination of a probability

that the customer will take the predefined action, the second request including receiving a third electronic

communication that includes a second input value set comprising at least information derived; and from

the application computing system **(0178)**;

Fujiwara however does not expressly teach "a third electronic communication that includes a

second input value set comprising at least information derived from the additional information about the

customer that became available at the application computing system after the sending of the first

request", and "the second input value set derived from the additional information about the customer

that became available at the application system after the sending of the first response".

Davis however teaches said features **(para 22: " identify transaction patterns of a set of**

consumers in one or more earlier first time periods that correlate to purchases by those

consumers of one or more products and services within specified product and service classes

in one or more later second time periods after the one or more earlier first time periods. ";

para 50; incentives being offered during the interactive pot of sail session discussed in para

46).

One of ordinary skill in the art would have recognized that the results of the combination were

predictable. It is well known that more information gives more accurate prediction models. Receiving

such information and using it in transactions is also beneficial to the modeling and therefore the results of

the model (proper incentives). Since customers tend to make multiple purchases, using data from each

purchase / transaction help give such additional data to make a more accurate model. Since customers

make multiple transactions, they happen over a time span. Therefore, it would have been obvious that

whenever a new piece of information from a transaction is recorded, that information is used to update

the prediction model as claimed and as disclosed.

The combination does not expressly disclose: "during the course of the interactive session with

the customer"

The combination also does not expressly teach: "in response to the second request, the

prediction computing engine performing the second prediction determination using both of the stored

first state information generated as part of the first prediction determination and the second input value

set derived from the additional information about the customer that became available, the first state

information *being used to avoid calculations being performed in the second prediction determination that*

would duplicate calculations that were already performed in the first prediction determination, and

providing to the application computing system for use by the human user a second prediction result of

the second prediction determination" **(Portion in italicized emphasis is not given patentable**

weight as it does not necessitate function and is drawn merely to non-functional descriptive

matter; Patentable weight was not given because the claim language is drawn to intended

outcome of the limitations of the claim, and not actual steps or structural limitations.

Nevertheless, the art cited below teaches the feature.).

Hoffberg however discloses the first feature (during the course of the <u>interactive session with the</u> <u>customer</u>): **(col: 62 line: 28-38: "In fact, in a further embodiment, an interactive medium may be used allowing immediate or <u>real time communication between recipient and advertiser</u>.")**

Hoffberg likewise discloses the storing of state information and its reuse for reduction of duplicate calculations: **(col: 142 line: 24-26: "The preferred algorithm has a tree structure, wherein the identification need only differentiate a few possibilities, and pass the result to another branch of the tree for further analysis, if necessary. Since the <u>intermediate calculations may help in later computations, these should preferably be retained, in order to avoid duplicative analysis</u>.")**

The motivation for performing such a combination would be to reduce overhead associated with creating duplicative analysis. The Hoffberg and the art recognizes that such calculations are redundant and unnecessary. One would have been motivated to perform such a combination to make the prediction engine and prediction processes work faster and use less computing power **(Hoffberg: col: 142 line: 24-26)**.

Fujiwara discloses: 3. (Currently Amended) The computer-implemented method of claim 1, wherein the second input value set includes both the first input value set and an additional set of input values, and wherein the method comprises using a decision tree along with the stored state information and the additional set of input values to compute the second prediction **(0178)**.

 Fujiwara discloses: 5. (Previously Presented) The computer-implemented method of claim 1, wherein the first input value set includes at least two input values **(0178; Fig 16A; Fig 2)**.

Fujiwara discloses: 6. (Previously Presented) The computer-implemented method of claim 1, wherein the second input value set includes at least two input values **(0178; Fig 16A; Fig 2)**.

Fujiwara discloses: 11. (Currently Amended) The computer-implemented method of claim 1, wherein the

first state information includes intermediate probability information **(Fig 15 wherein the model**

specified in S24 is further refined and is therefore intermediate information; Fig 52; para 178

- "response rate is again predicted").

Fujiwara discloses: 32. (New) The computer-implemented method of claim 1, wherein the second input

value set is provided to the application computing system by the human user as a result of interaction by

the human user with the customer **(para 0129: "personal-characteristic data comprises answers**

to predetermined questions 1, 2, 3, and so on"; in this case, the second input are questions

2, 3, ...).

As per claims 33-37, 39, note the rejection of claims 1, 3, 5, 6 and 11 above. The Instant Claims recite

substantially same limitations as the above-rejected claims and are therefore rejected under same prior-

art teachings.

6.   Claims 12 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujiwara **(US**

         20020091875) in view of Davis **(US 20040034570),** in view of Hoffberg **(US 6400996)** as

         applied to claim 1 above, and further in view of Tamayo **(US 20020083067)**.

Regarding claim 12, the combination of Fujiwara , Davis and Hoffberg fully discloses the parent claim's

limitations. The combination however does not expressly disclose that "the first and second prediction

results each specify a probability of customer chum."

Tamayo however discloses an analogous prediction computing engine having the said feature **(para**

241).

One of ordinary skill in the art would have recognized that the use of prediction models to predict

customer churn is well known and the result of the combination of using a decision tree and prediction

models to predict customer churn would have been predictable. Additionally, one would have been

motivated to combine the references to make the operation of the combination work in an automated

and cost effective manner. **(Tamayo: para 0006)**.

As per claim 38, note the rejection of claim 12 above. The Instant Claim recites substantially same

limitations as the above-rejected claim and is therefore rejected under same prior-art teachings.

Conclusion

7.   All claims are rejected.

8.   The Instant Application is not currently in condition for allowance.

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Silver whose telephone number is (571) 272-8634. The examiner can normally be reached on Monday thru Friday, 10am to 6:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini Shah can be reached on 571-272-2279. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Kamini S Shah/

Supervisory Patent Examiner, Art Unit 2128

/ DS / _____

David Silver, Patent Examiner
Art Unit 2128